

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number  
**WO 2005/063564 A3**

(51) International Patent Classification<sup>7</sup>: **B64D 33/02**,  
33/04, F02C 7/042, 7/057

(21) International Application Number:  
PCT/EP2004/014856

(22) International Filing Date:  
30 December 2004 (30.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
103 61 644.6 30 December 2003 (30.12.2003) DE

(71) Applicant (for all designated States except US): **AIRBUS  
DEUTSCHLAND GMBH** [DE/DE]; Krectslag 10, 21129  
Hamburg (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SCHMIDT, Rüdiger** [DE/DE]; Kastanienweg 4, 21717 Fredenbeck (DE).  
**SOLNTSEV, Alexander** [DE/DE]; Am Mühlenbach 15,  
22115 Hamburg (DE).

(74) Agent: **BEYER, Andreas**; Wuesthoff & Wuesthoff,  
Schweigerstrasse 2, 81541 München (DE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SI, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

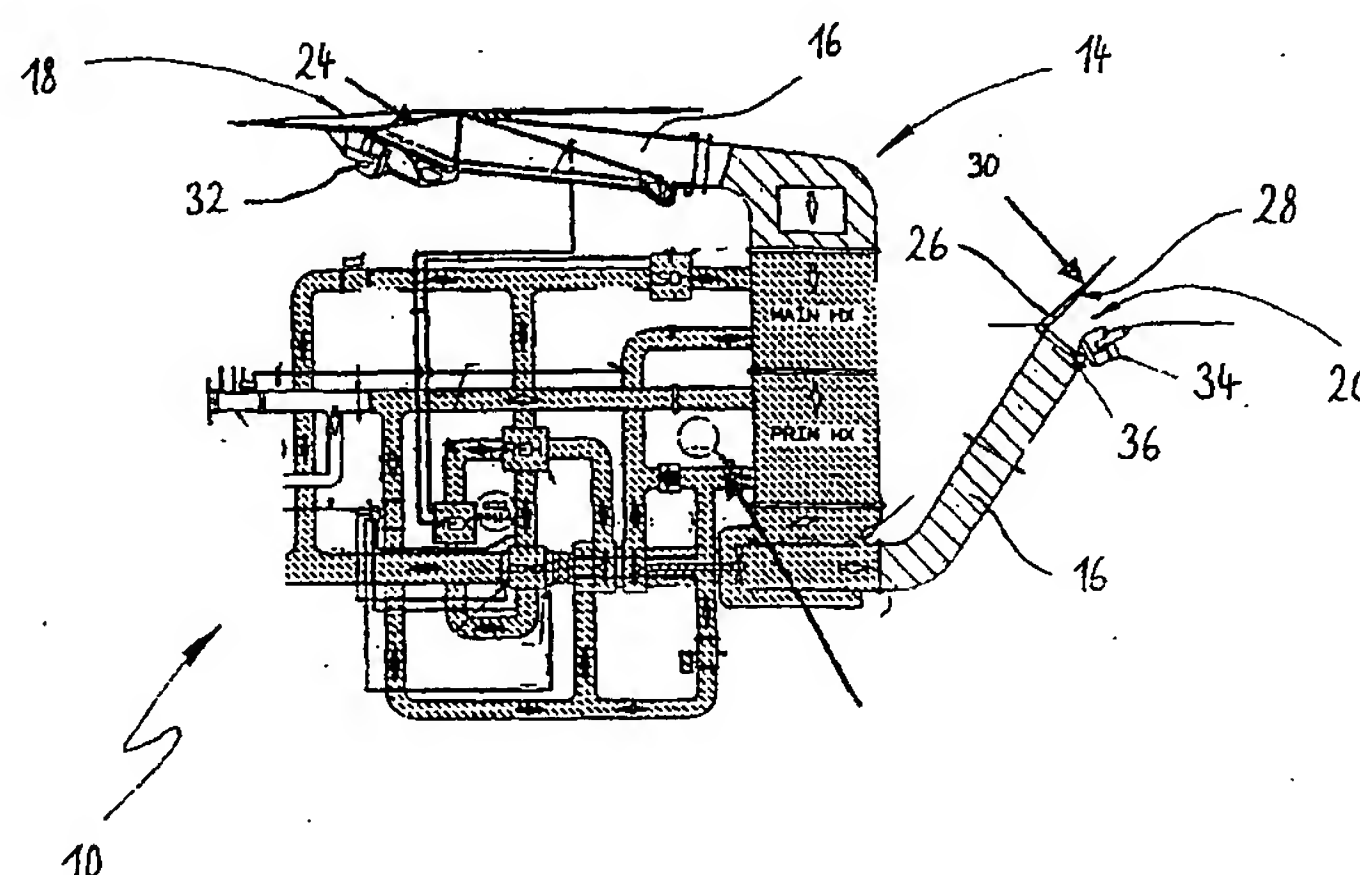
Published:

— with international search report

(88) Date of publication of the international search report:  
22 September 2005

[Continued on next page]

(54) Title: AIR GUIDING FLAP OF AN AIRCRAFT COMPRISING CONTROL OF THE PRESSURE FORCES IMPINGING THEREON, PROCESS FOR ADJUSTING THE POSITION OF AN AIR GUIDING FLAP AND RAM AIR SYSTEM INCLUDING SUCH AN AIR GUIDING FLAP.



(57) Abstract: The invention relates to an air guiding flap of an aircraft wherein one surface (28) thereof faces an air duct and is exposed to a prevailing pressure in the air duct and whose opposite surface (30) is exposed to the pressure of the relative wind flowing past the aircraft. The air guiding flap comprises an actuator (34) for automatically opening and closing the air guiding flap which actuator (34) cooperates with a device for controlling the position of the air guiding flap. In order to keep the stress on the air guiding flap low a force detecting device (36) is provided which detects the force impinging on the actuator (34) based on a difference between the prevailing pressure in the air duct and the pressure of the relative wind flowing past the aircraft. The controlling device adjusts the position of the air guiding flap such that the force impinging on the actuator (34) at any one time is at least essentially zero.

WO 2005/063564 A3



*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*